EE 5230 Analog Circuit Design **2014 Fall Semester**

1. Course Description: This course covers the analysis and design of analog integrated circuits. Extensive use of EDA tools (HSpice and Cadence) is required in homework assignments.

2. Prerequisites: Electric Circuits, Electronics, Signals and Systems (basic knowledge of s- and z-transforms)

3. Text books:

Design of Analog CMOS Integrated Circuits,
B. Razavi, McGraw Hill, 2001.

4. References:

CMOS Analog Circuit Design,
Oxford University Press, P. E. Allen and D. R. Holberg, 2011.
Analysis and Design of Analog Integrated Circuits,
P. R. Gray, P. J. Hurst, S. H. Lewis, and R. G. Meyer, Wiley, 2001.

5. Teaching Method:

Lectures offered in Mandarin

6. Evaluation:

Midterm:	35%	11/12/2014
Final:	35%	01/07/2014
Homework:	16%	4% each (**NO** late homework)
Final project:	20%	due on 01/22/2014 10:00

7. Class webpage: NTHU e-learning system (http://lms.nthu.edu.tw)

8. Syllabus

* Basic MOS Device Physics
* Single-Stage Amplifiers
* Differential Amplifiers
* Frequency Response of Amplifiers
* Feedback
* Operational Amplifiers
* Stability and Frequency Compensation
* Noise
* Nonlinearity and Mismatch

* Sign and return your user information (available on class webpage) by 10/01/2014.
* Tutorials for HSpice, Lakers, and Spectre are available on class webpage.
* Please contact TAs for EE workstation account application.